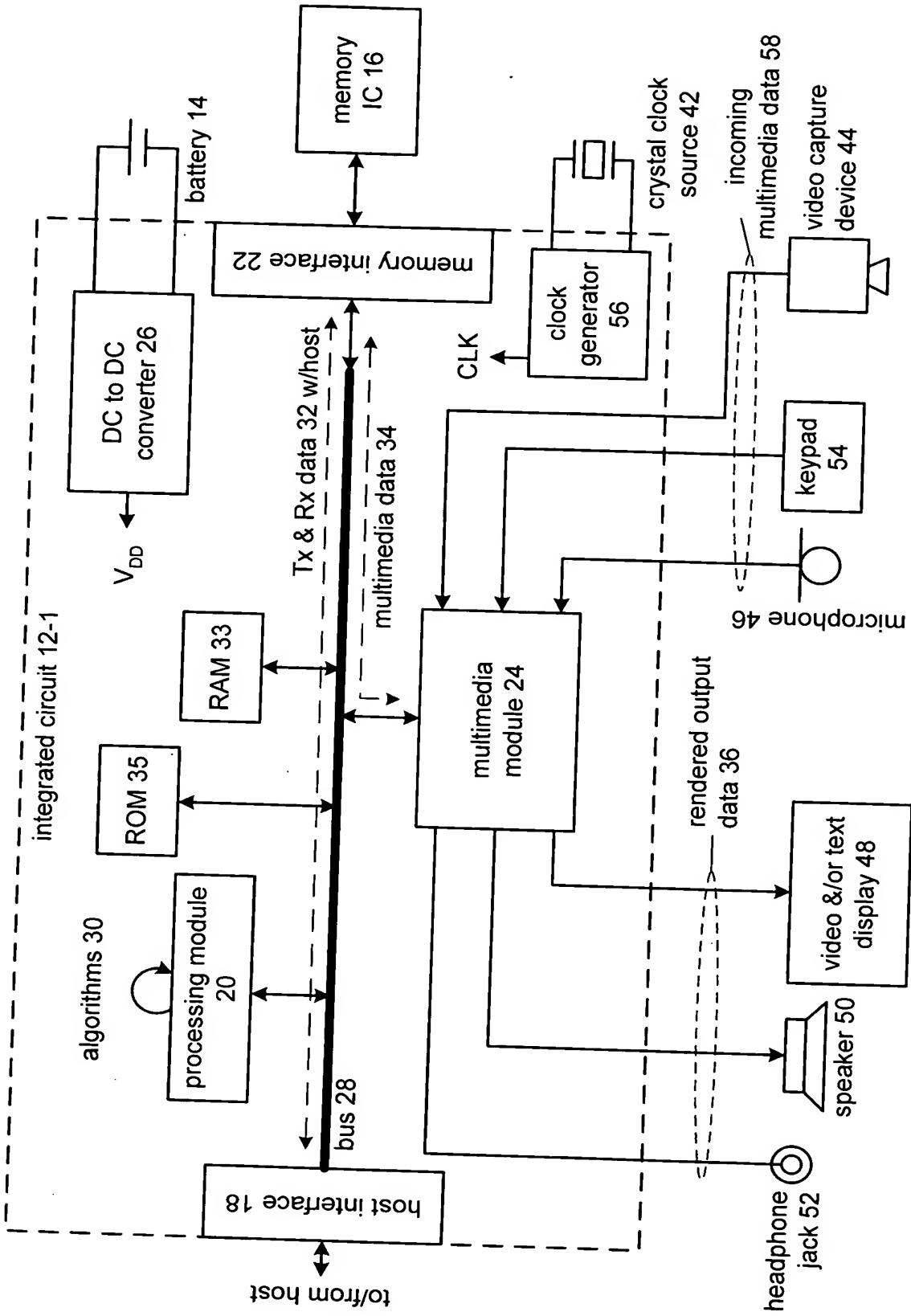
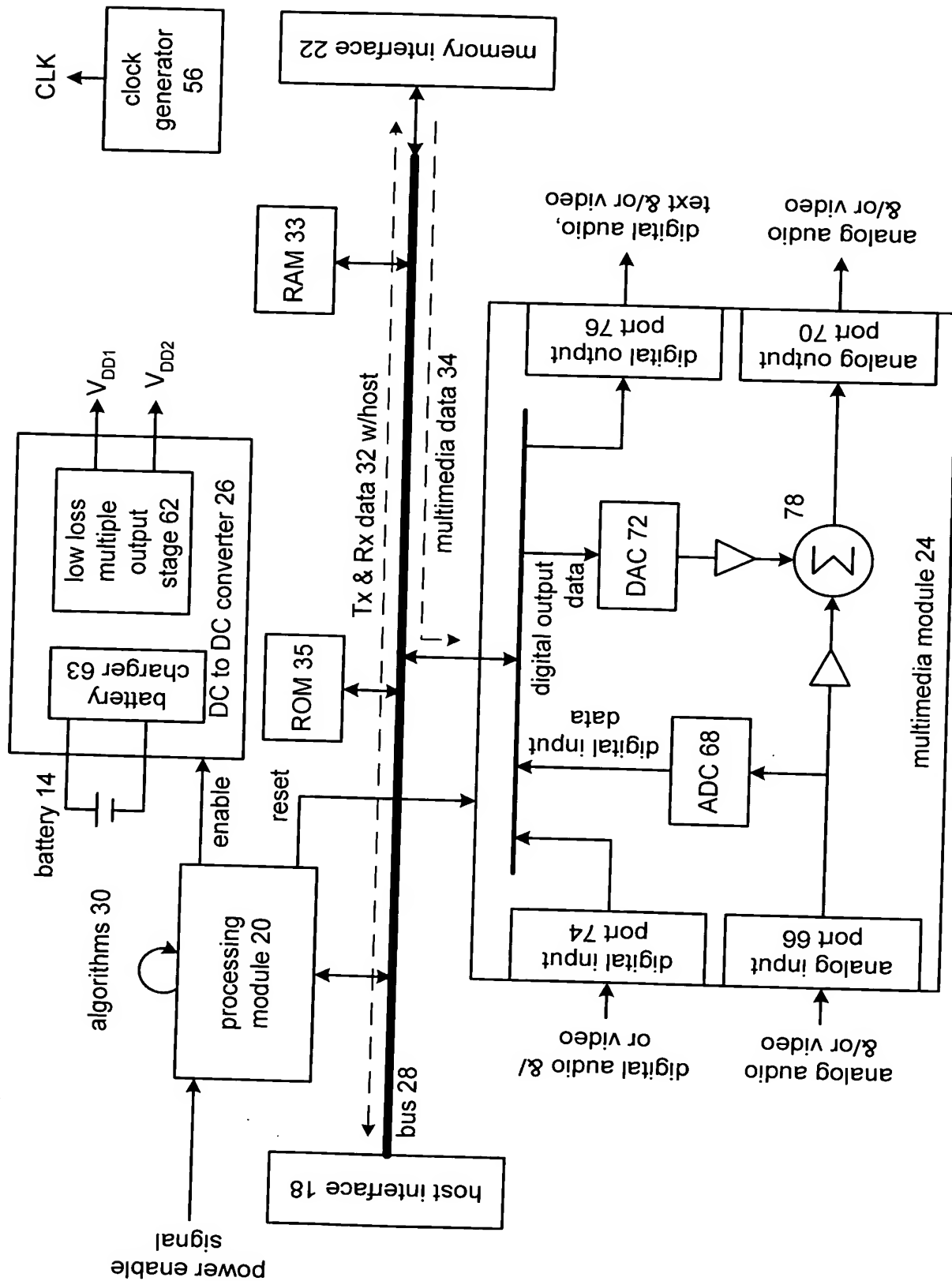


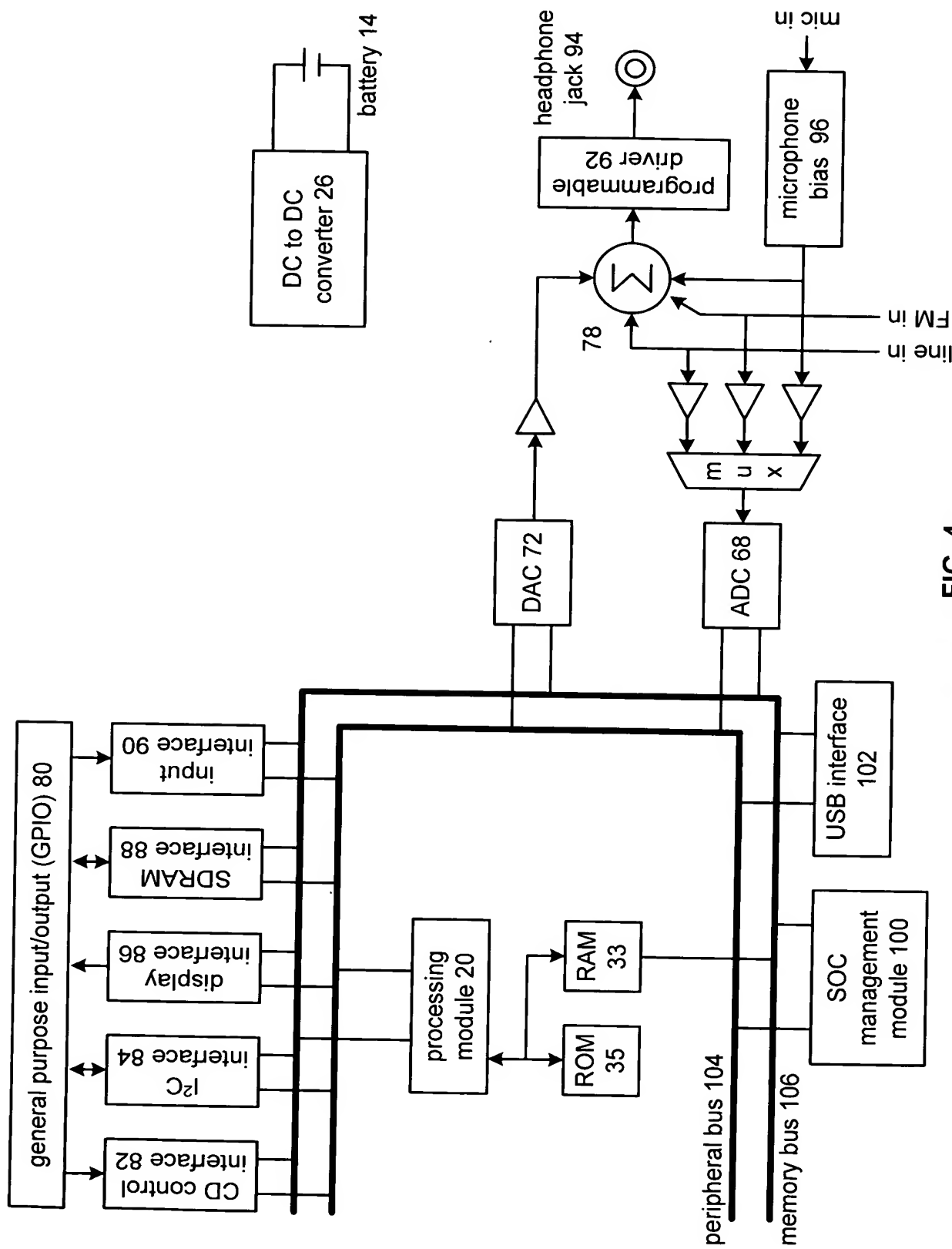
**FIG. 1**



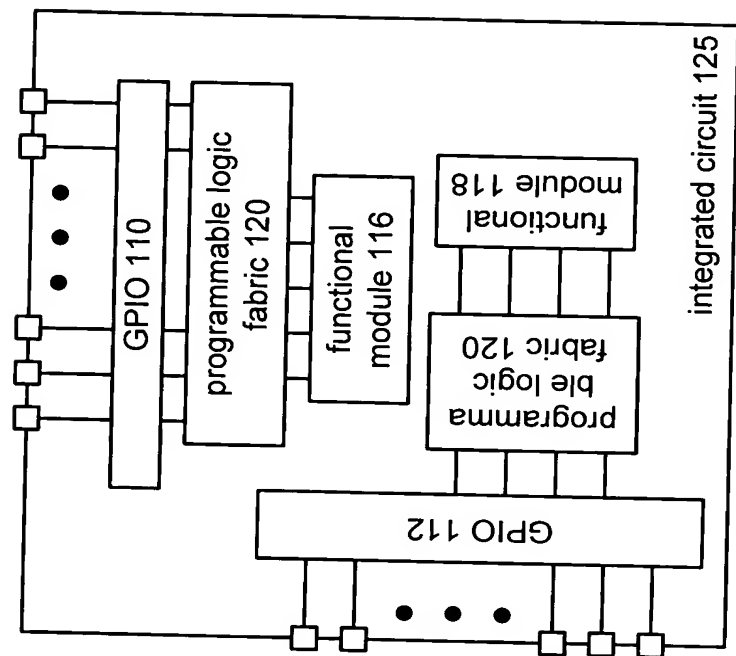
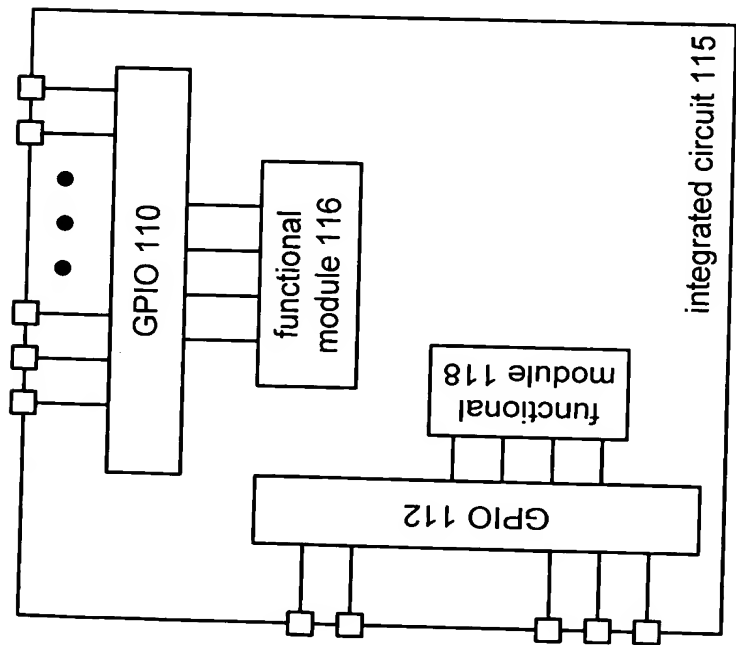
**FIG. 2**  
multi-function handheld device 40



**FIG. 3**  
integrated circuit 12-2

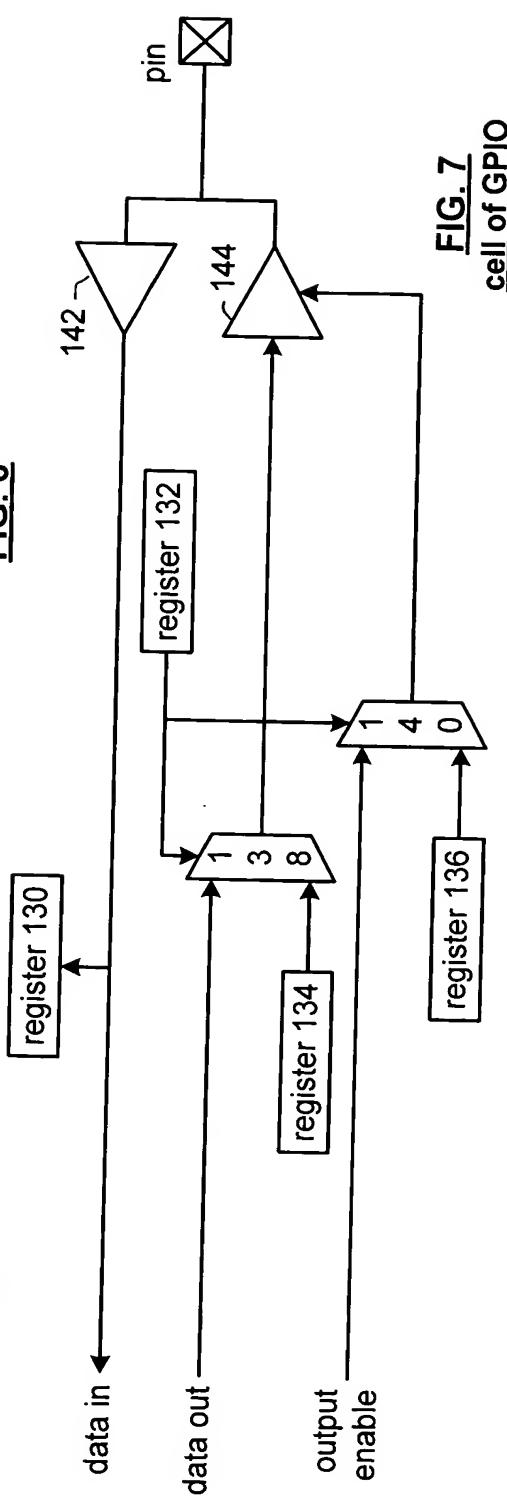


**FIG. 4**  
integrated circuit 12-3

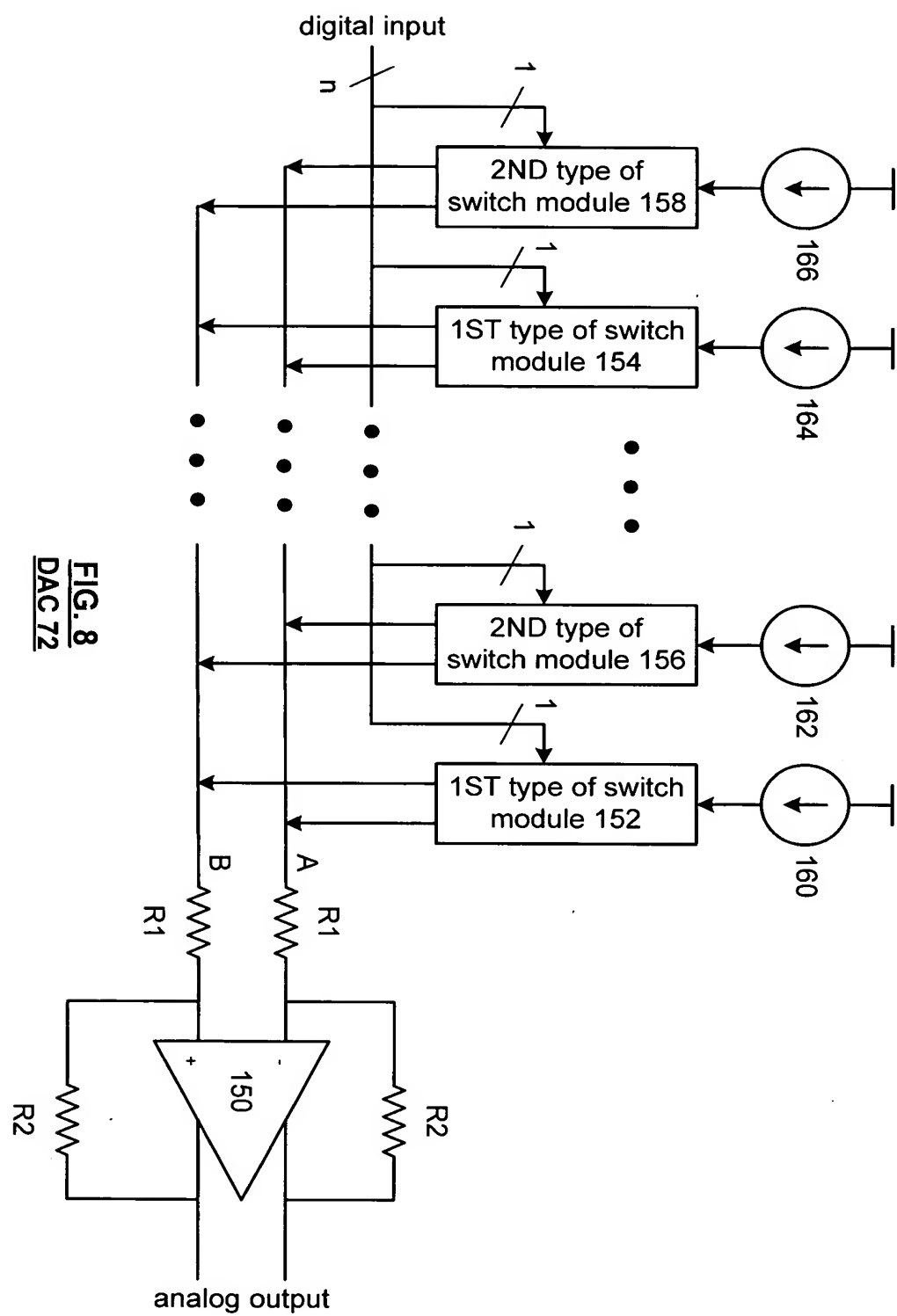


**FIG. 5**

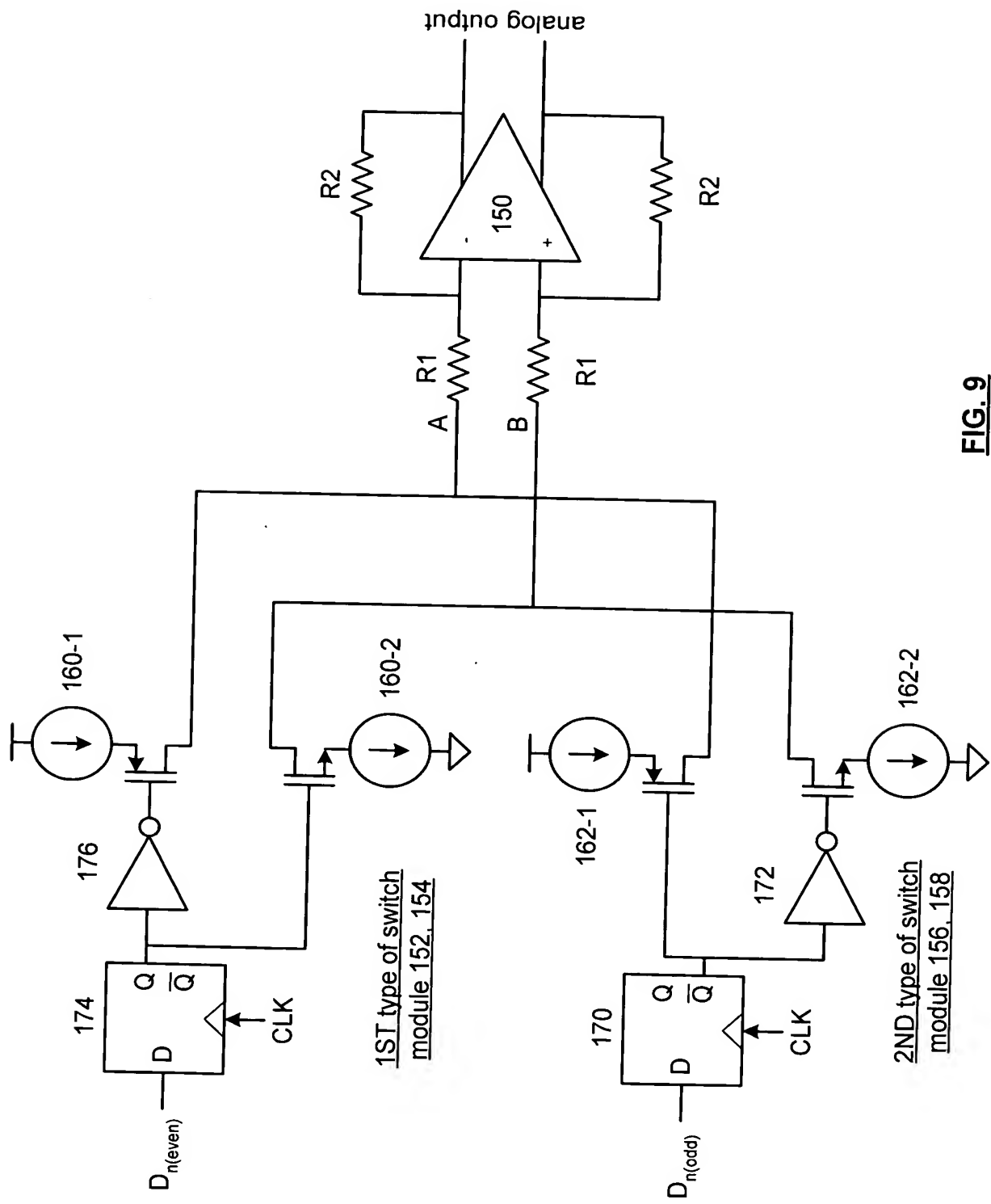
**FIG. 6**



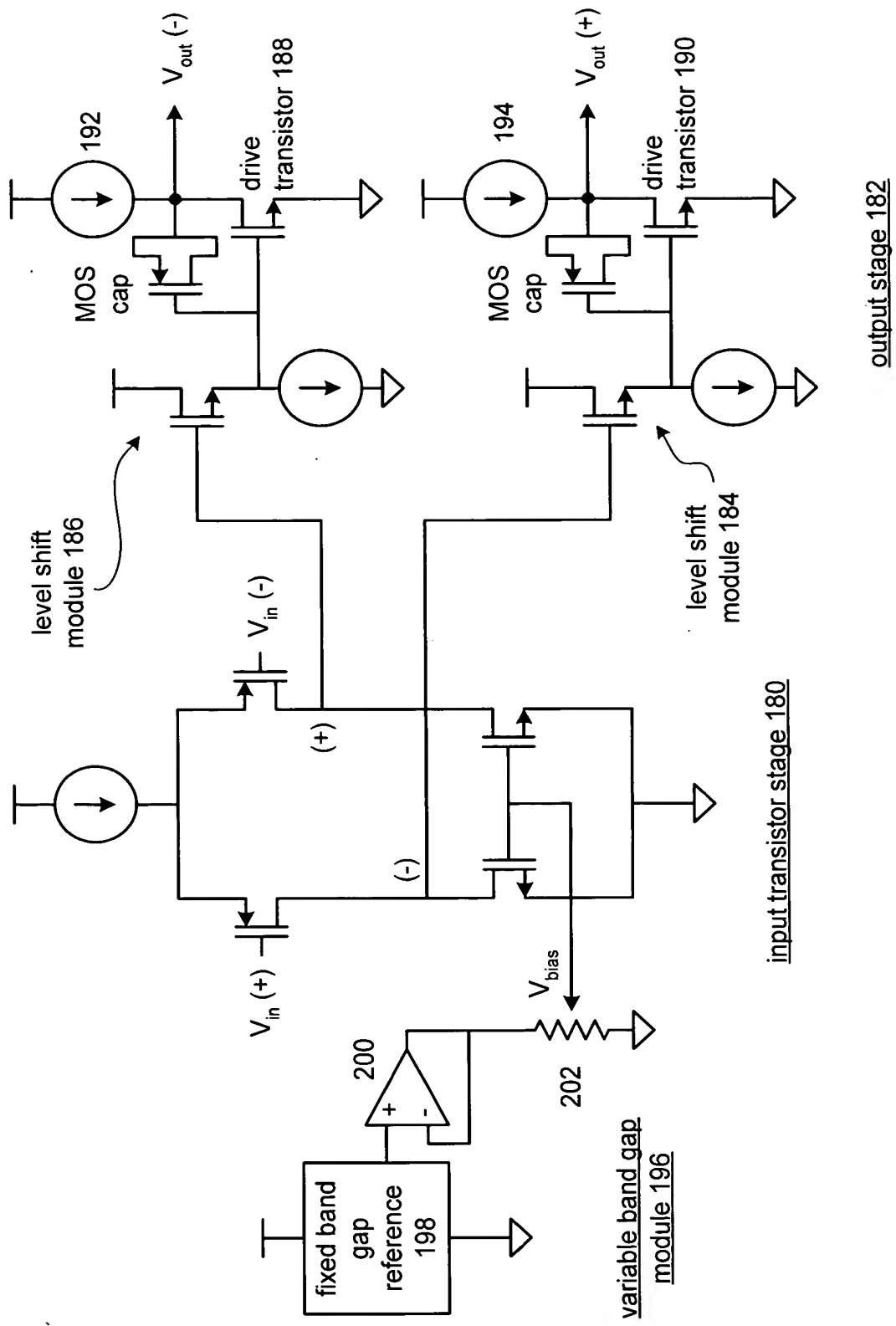
**FIG. 7**  
**cell of GPIO**



**FIG. 8**  
**DAC 72**

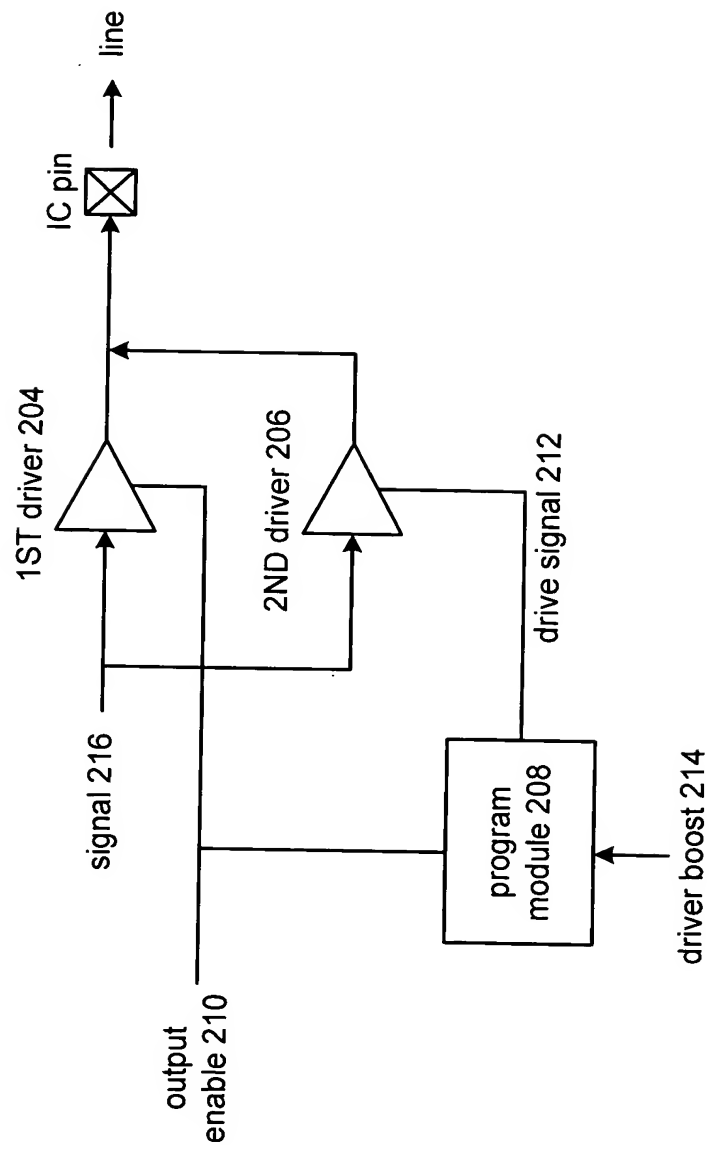


**FIG. 9**

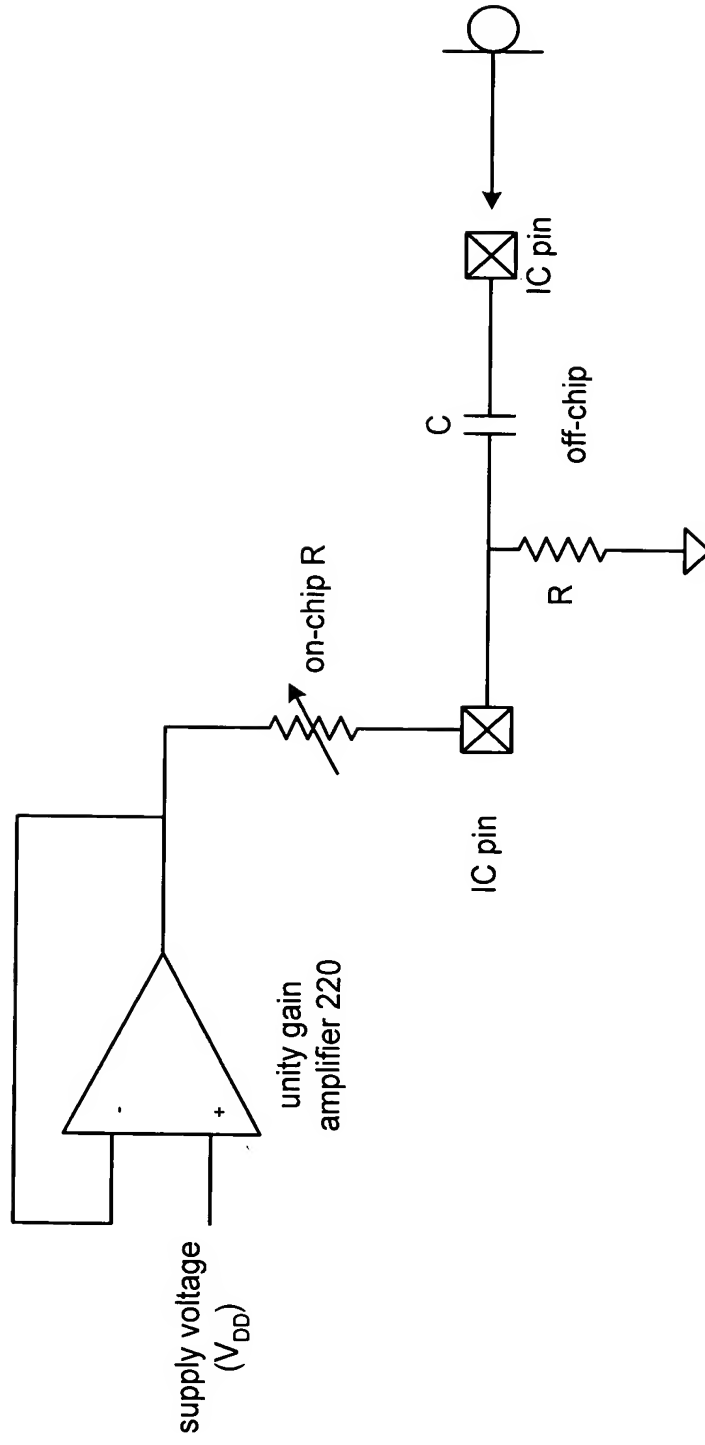


**FIG. 10**  
op amp 150

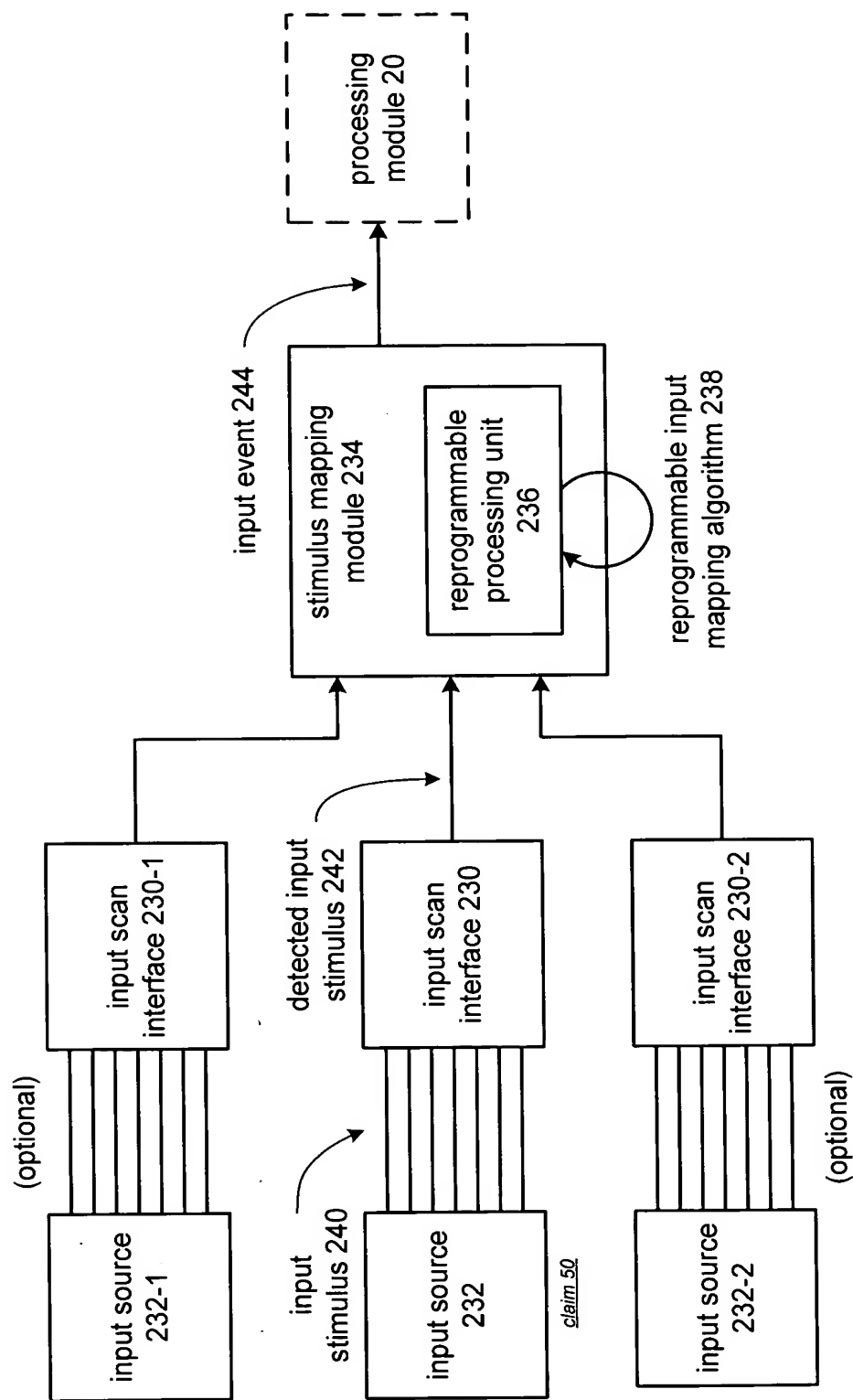




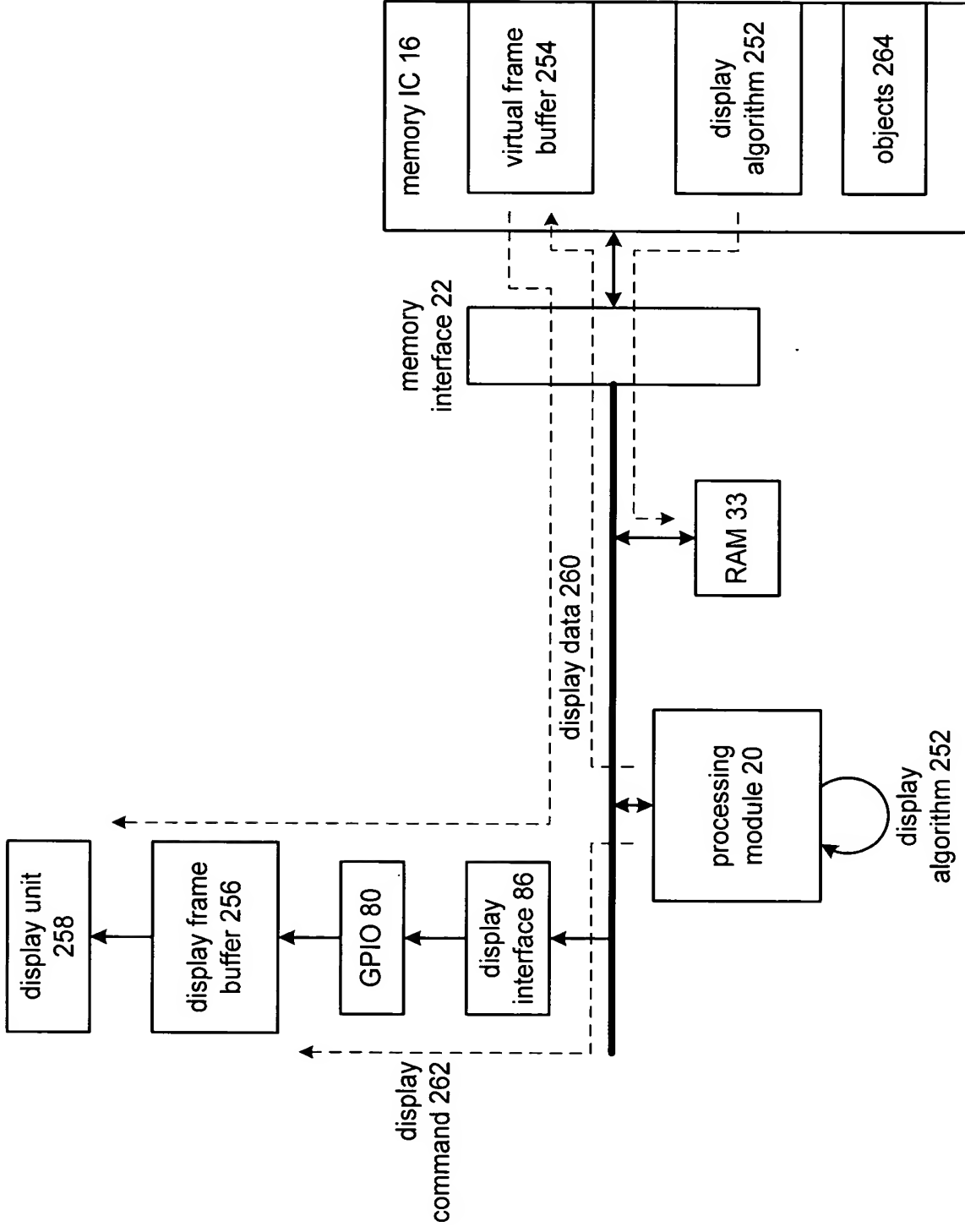
**FIG. 11**  
programmable driver 92



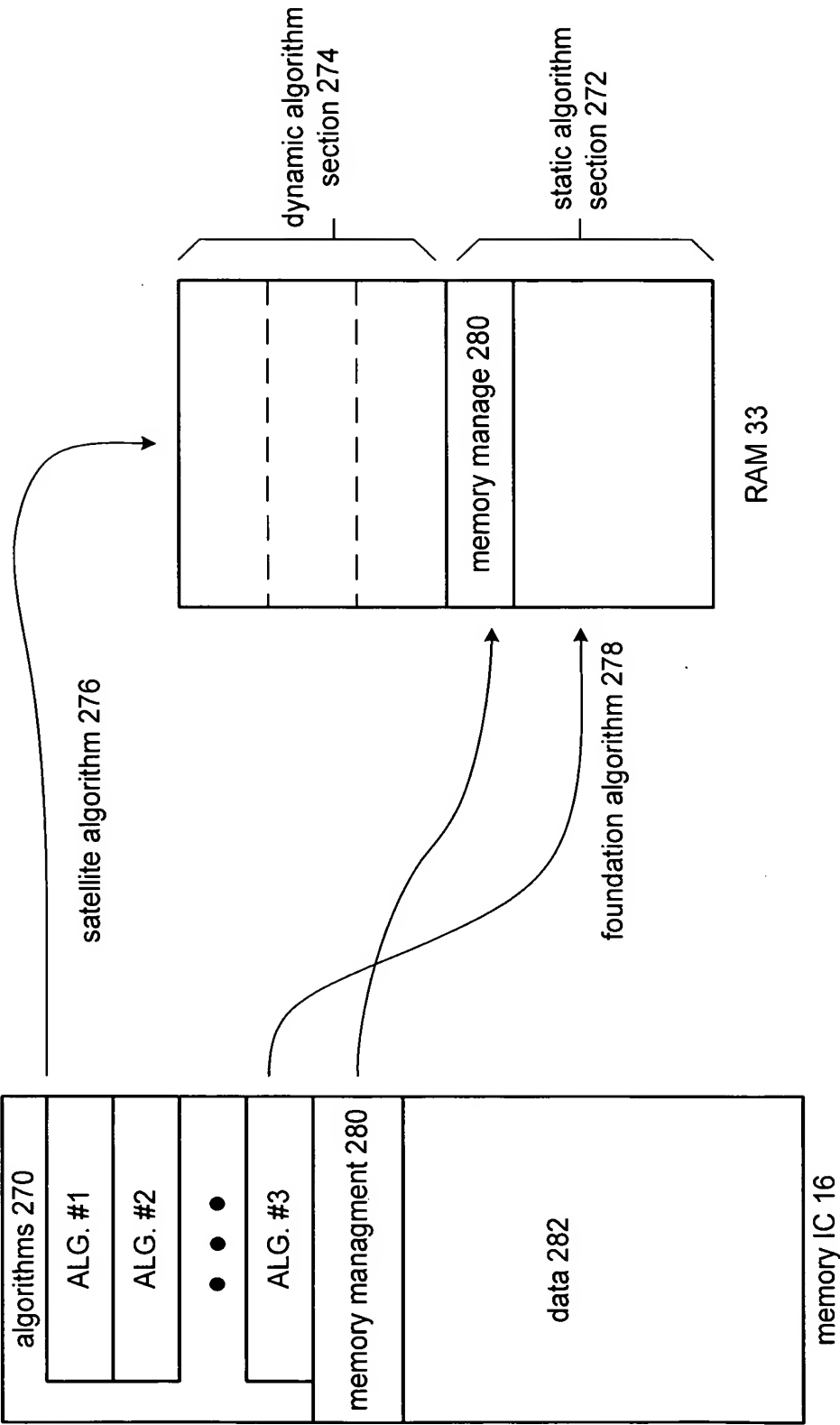
**FIG. 12**  
microphone bias 96



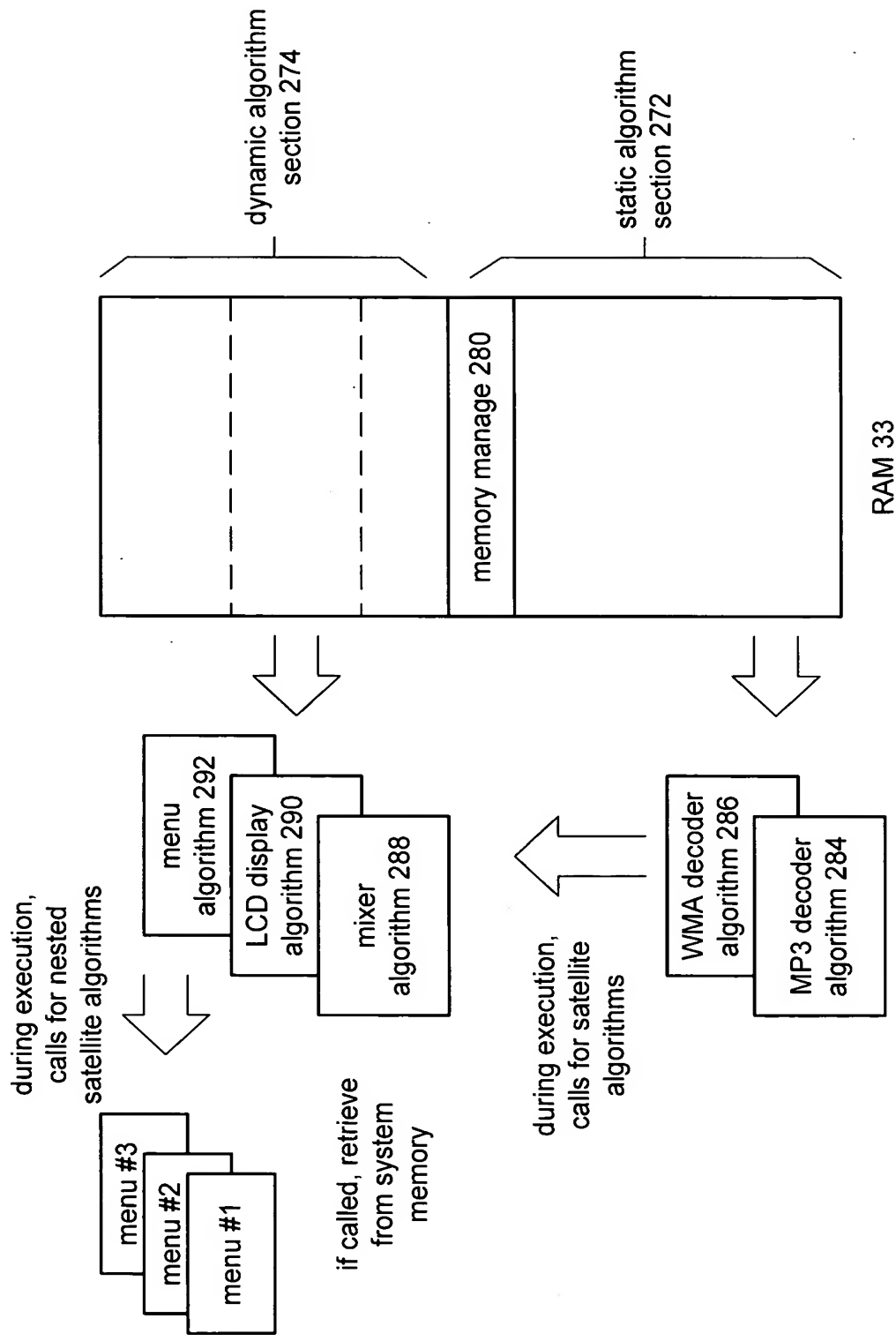
**FIG. 13**  
input interface 90



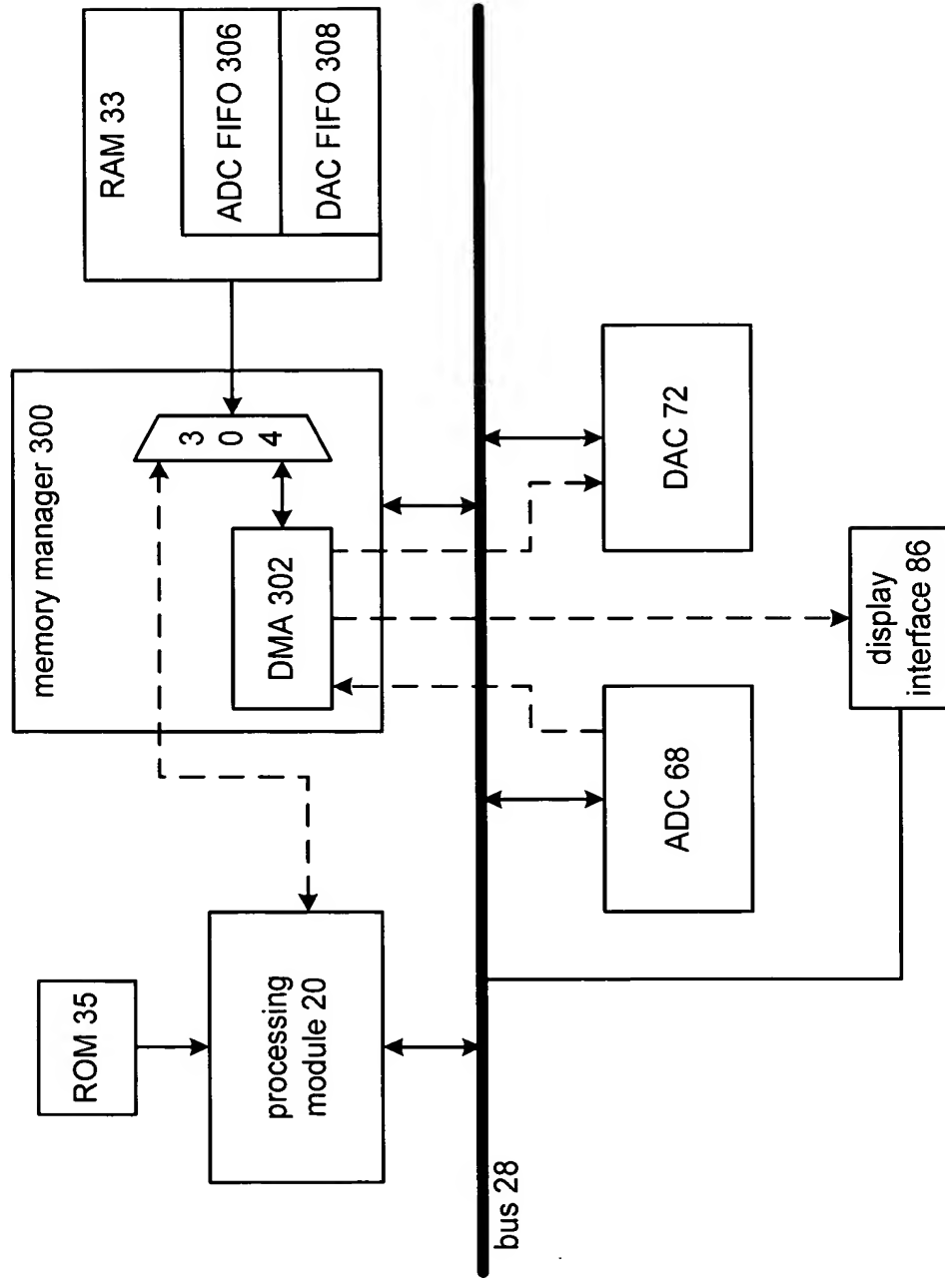
**FIG. 14**  
display interface system 250



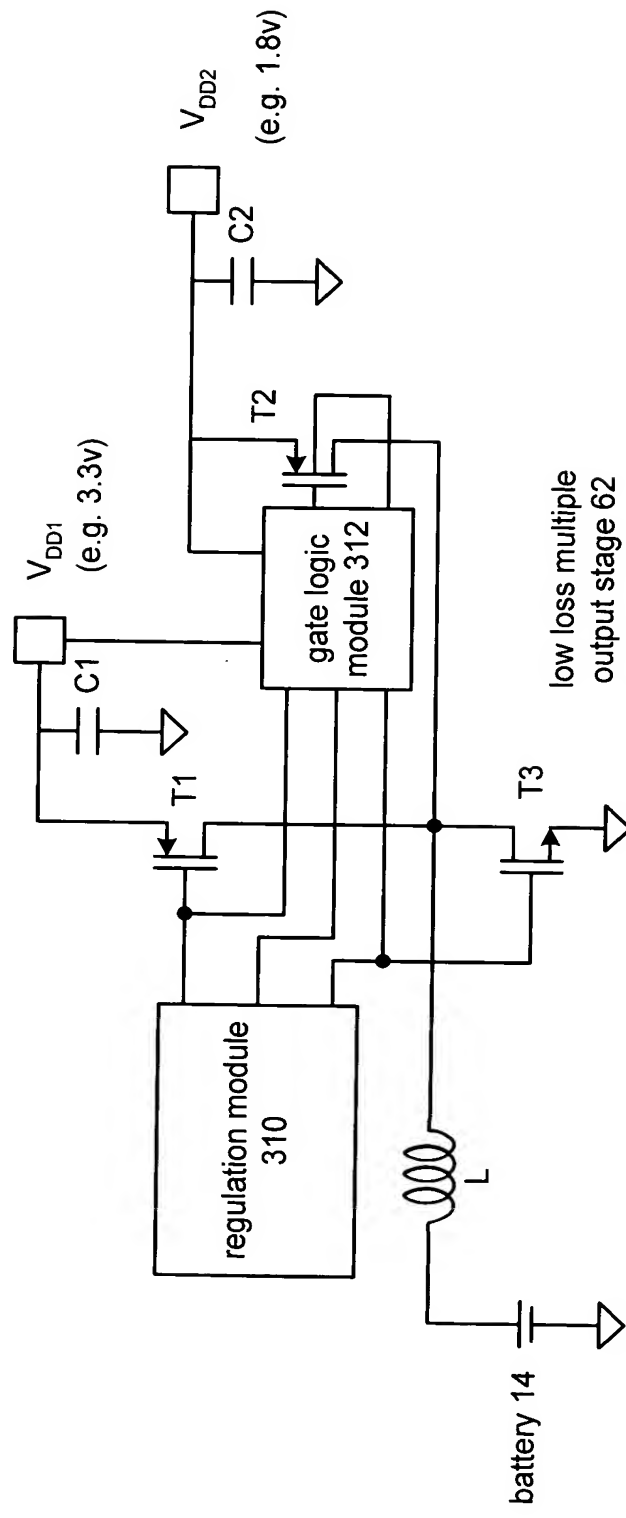
**FIG. 15**



**FIG. 16**



**FIG. 17**

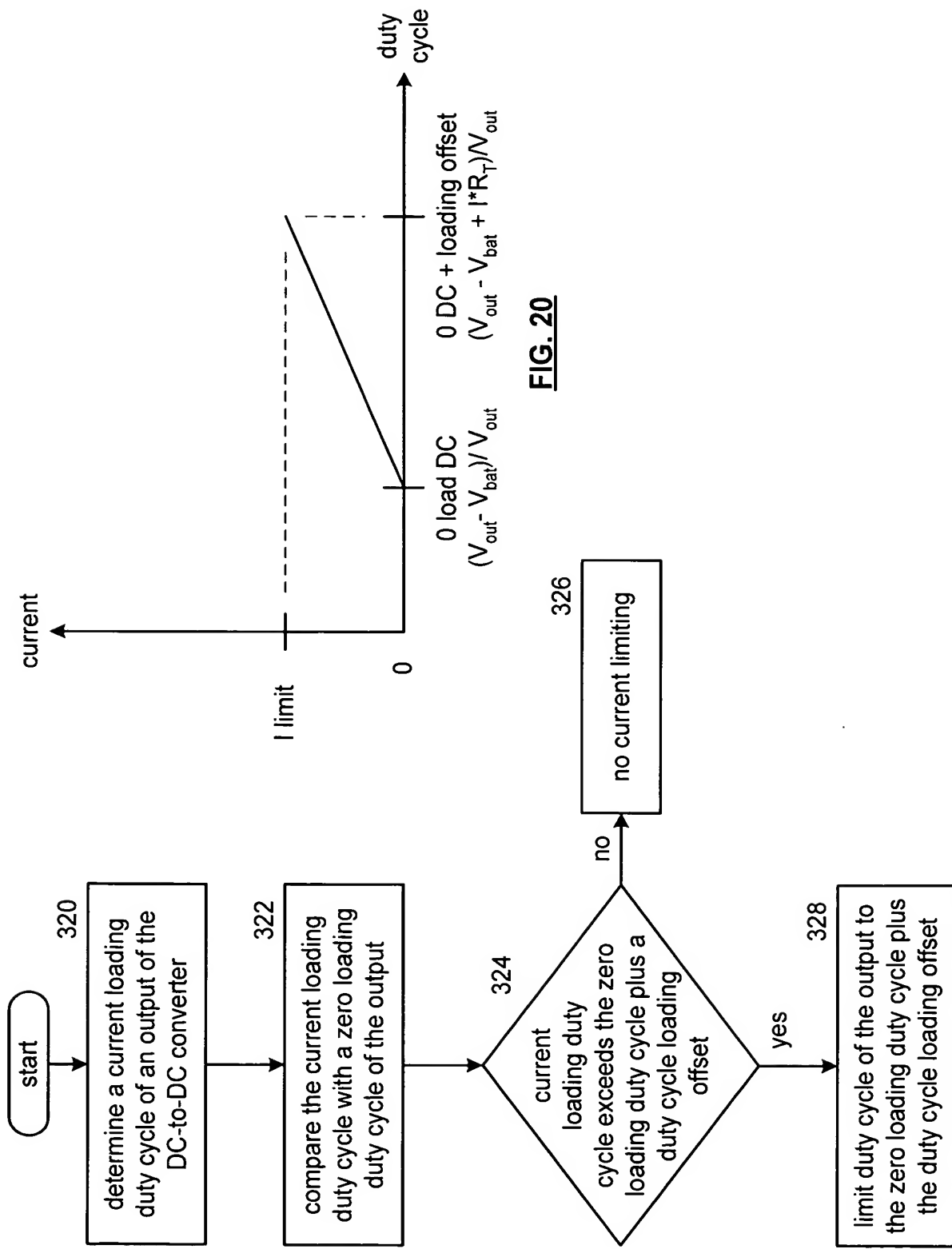


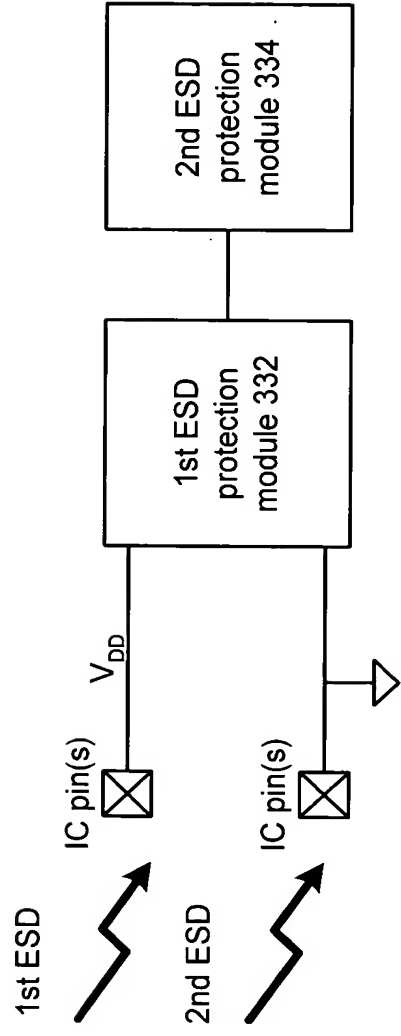
#### gate logic module function

- if T1 is on, set gate and well voltage of T2 to  $V_{DD1}$ ;
- if T1 is off and T3 is on, set gate and well voltage of T2 to  $V_{DD2}$ ;
- if T1 is off and T2 is on, set gate and well voltage of T2 to 0v

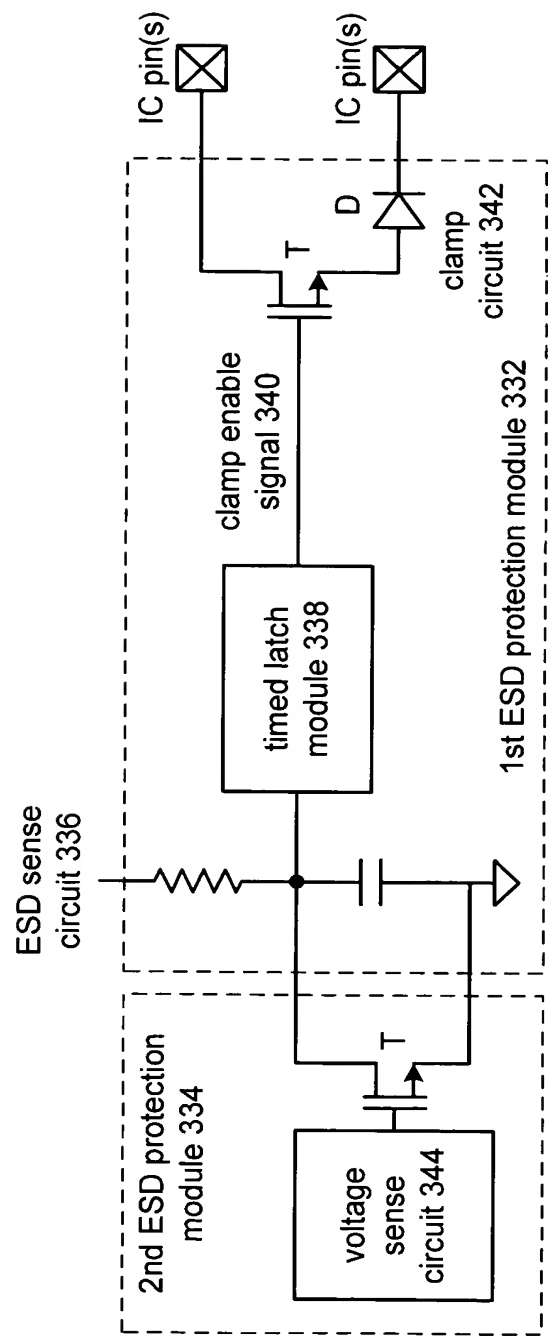
**FIG. 18**  
**DC to DC converter 26**



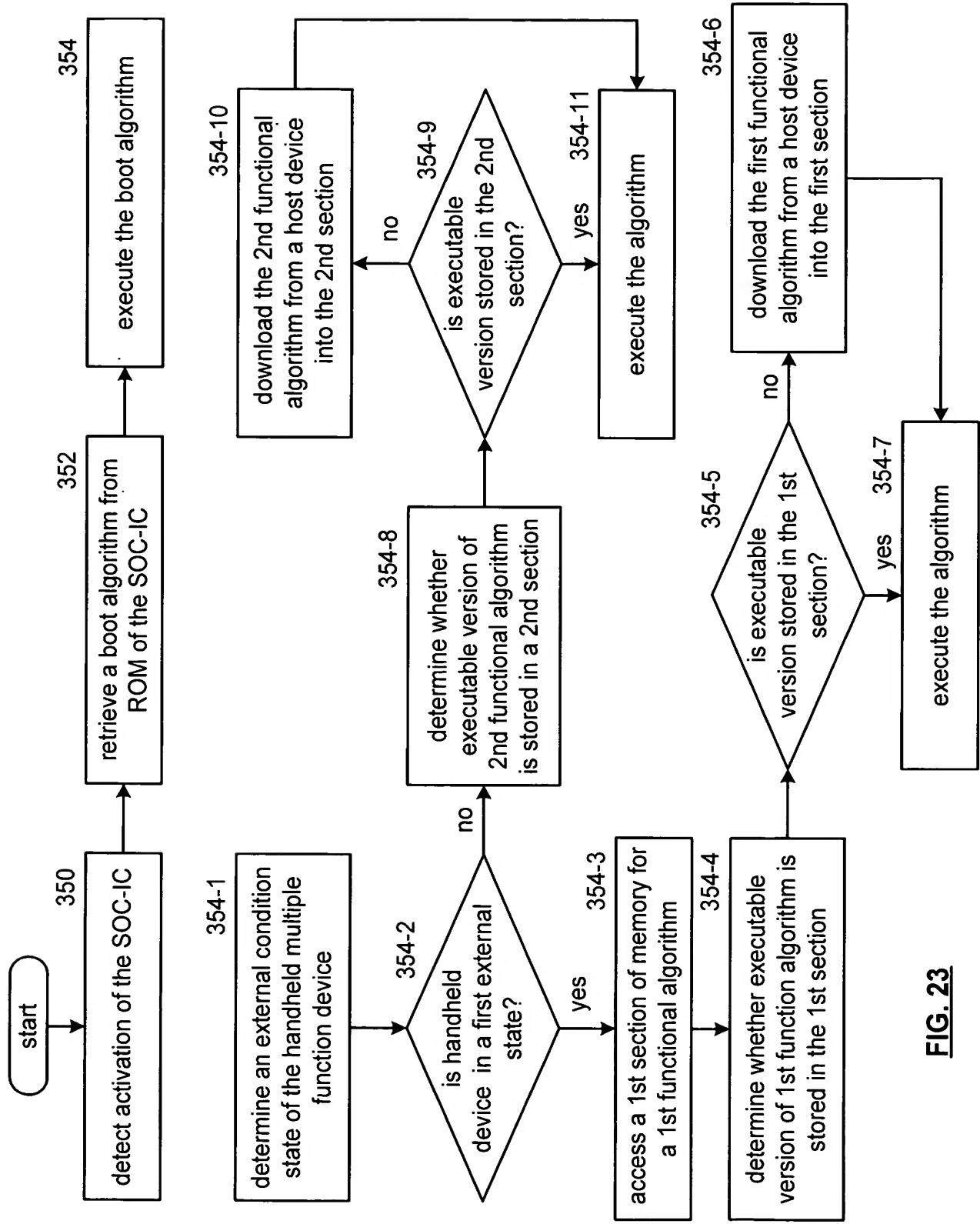




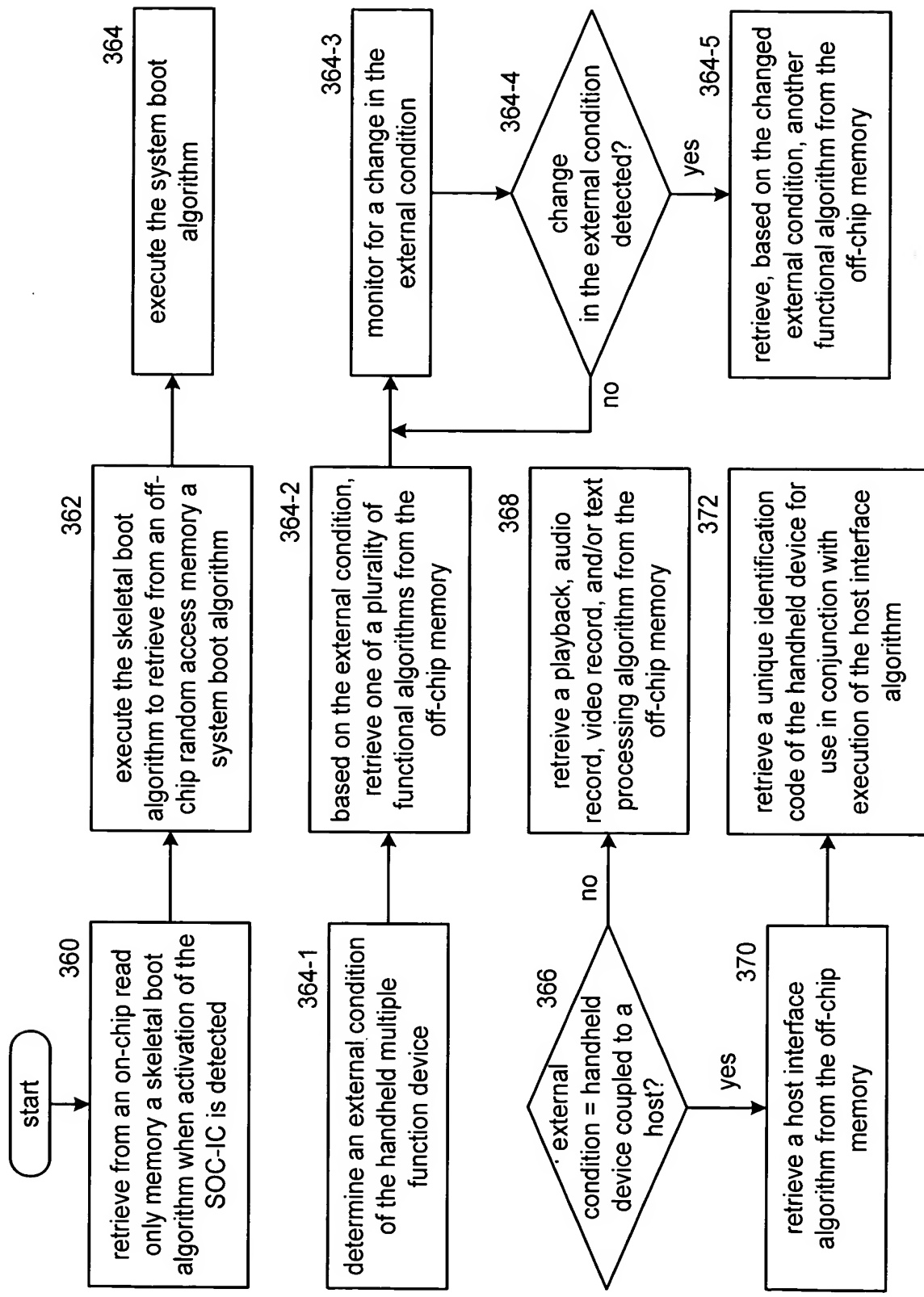
**FIG. 21**  
ESD protection circuit 330



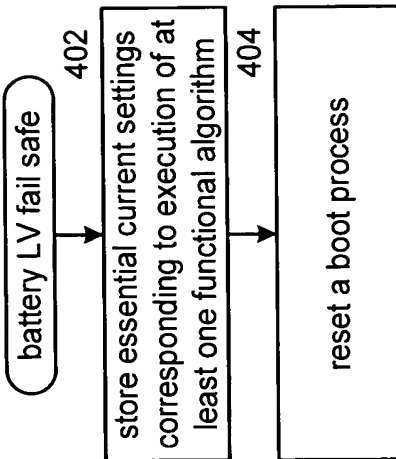
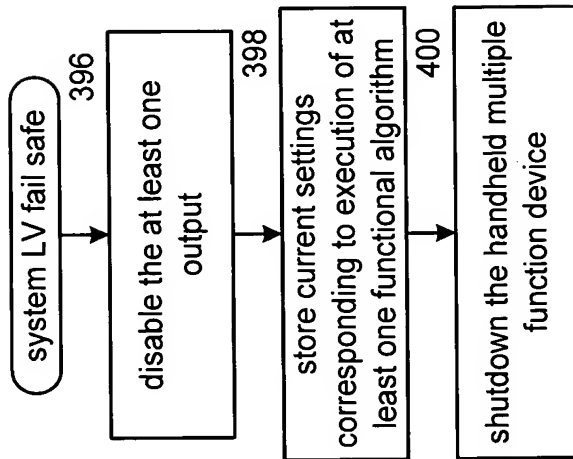
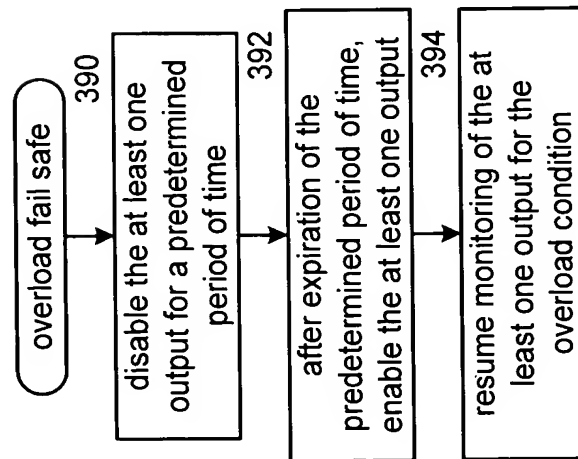
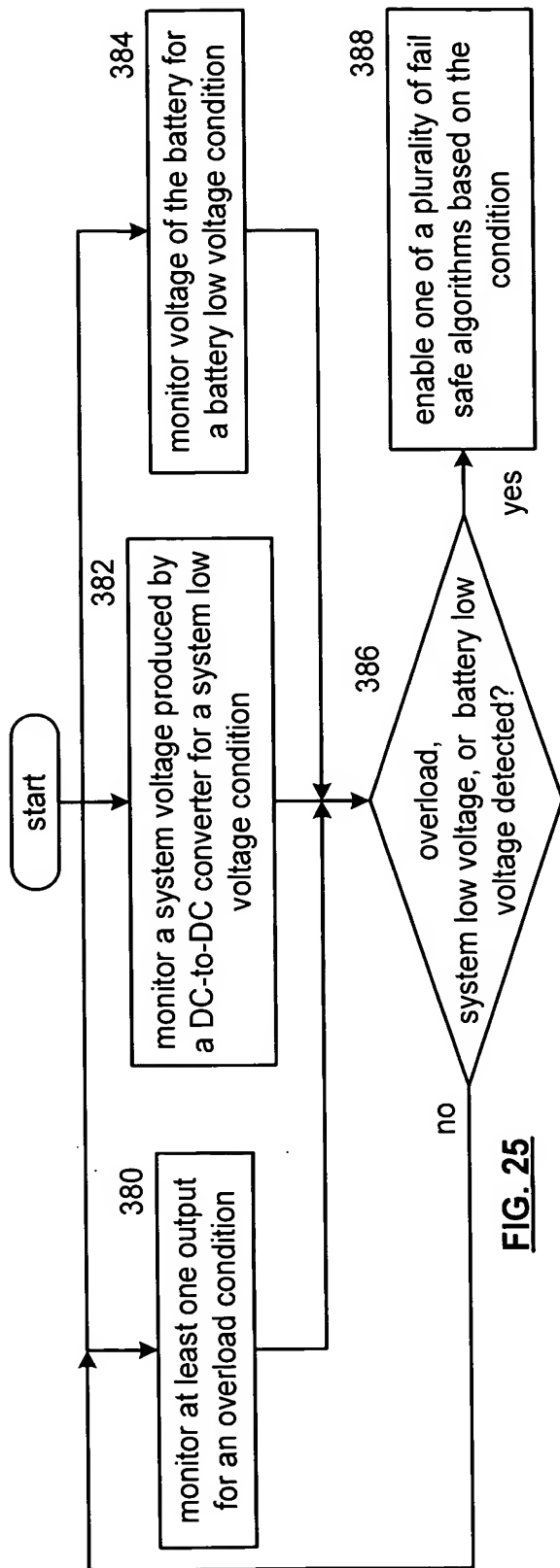
**FIG. 22**  
ESD protection circuit 335

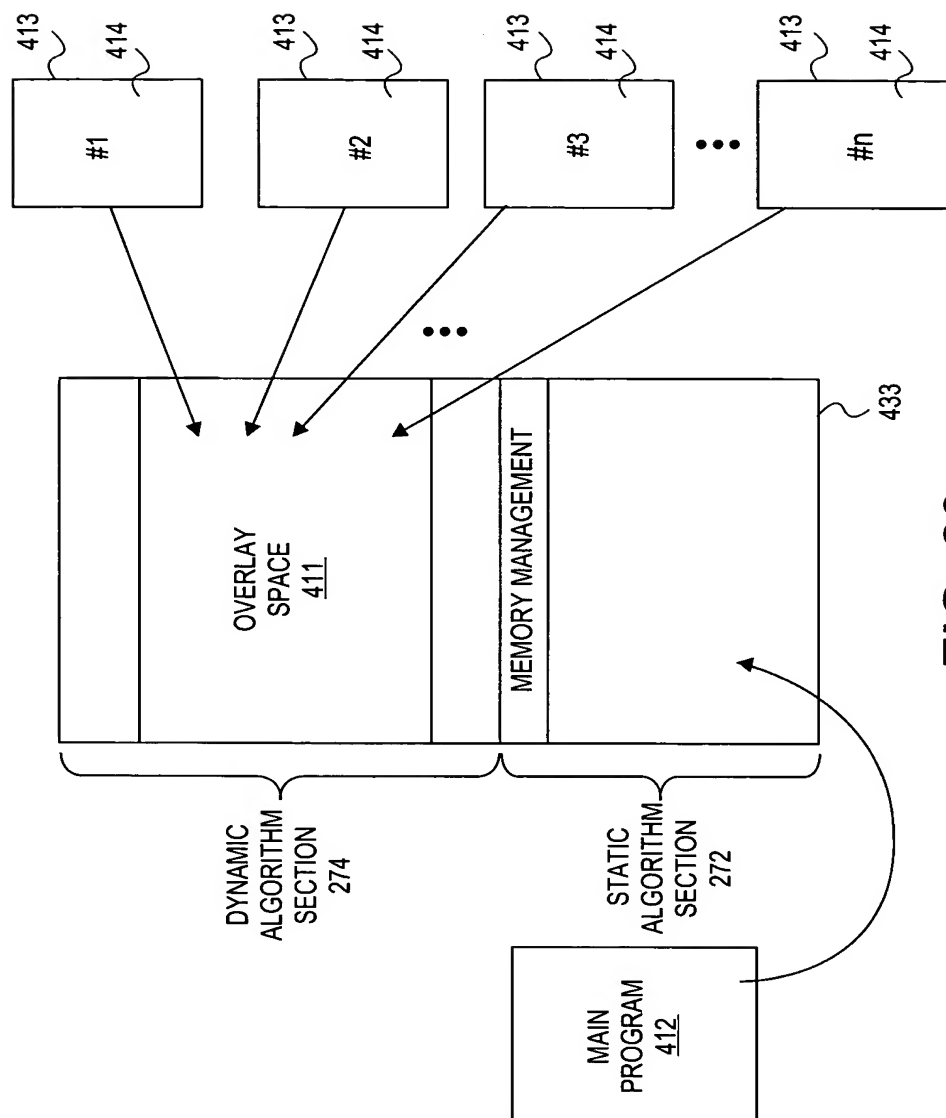


**FIG. 23**

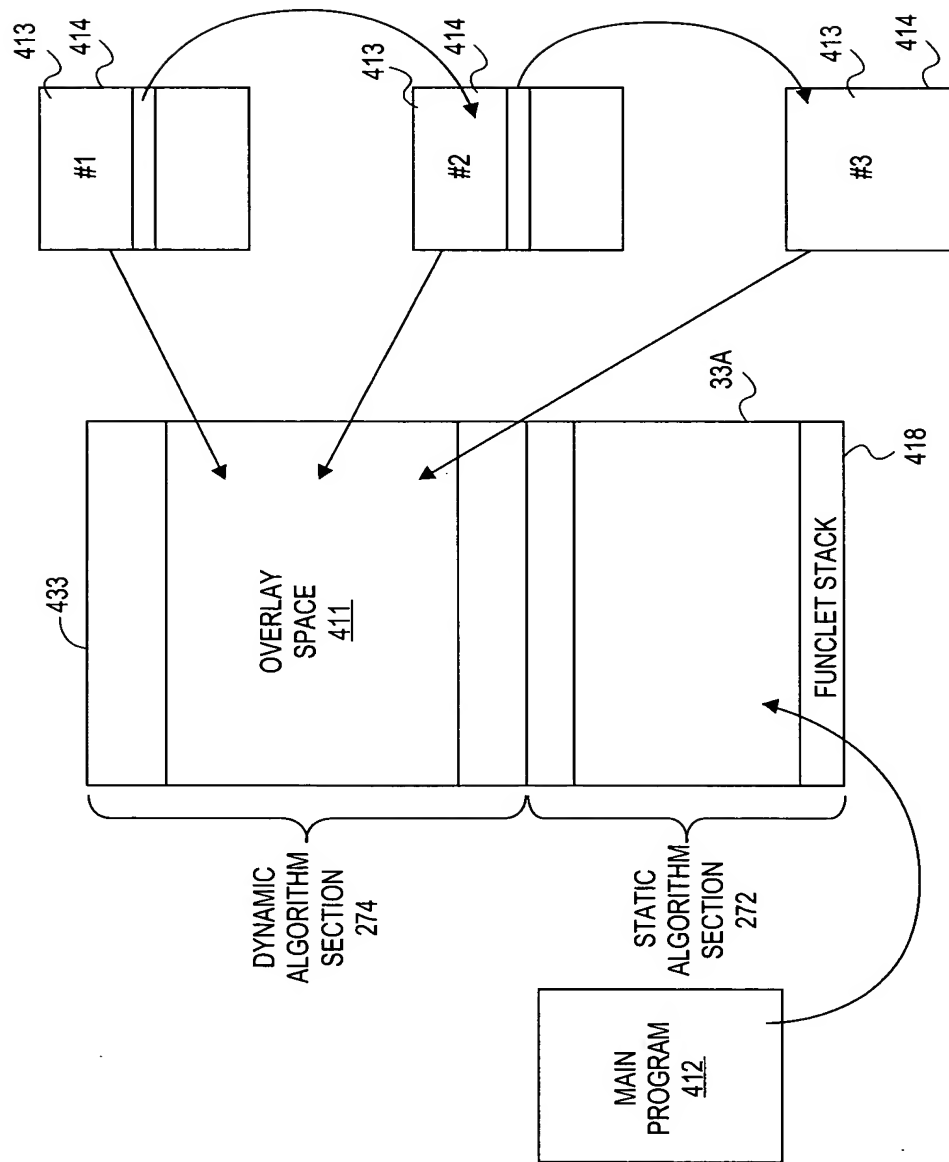


**FIG. 24**





**FIG. 29**



**FIG. 30**

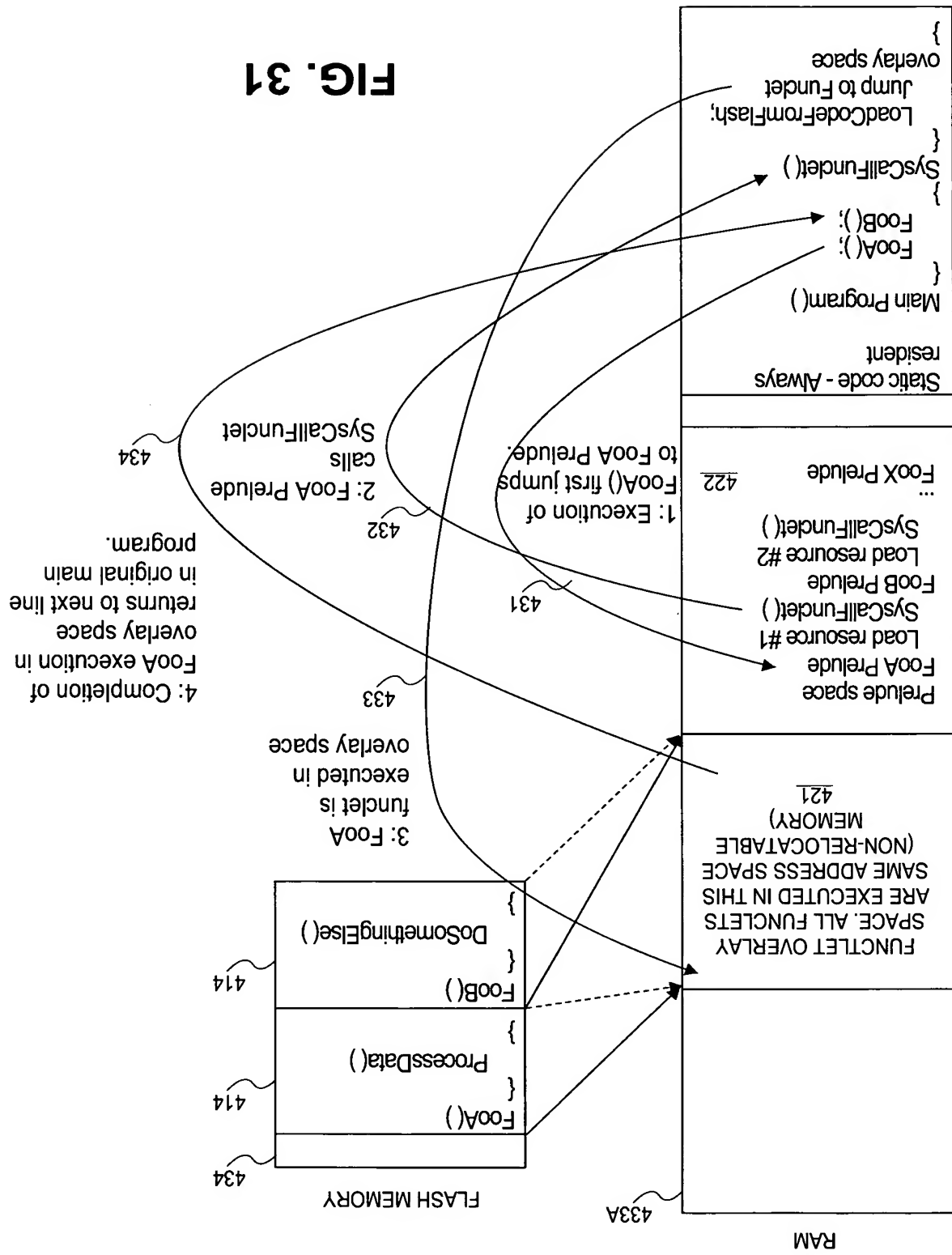


FIG. 31



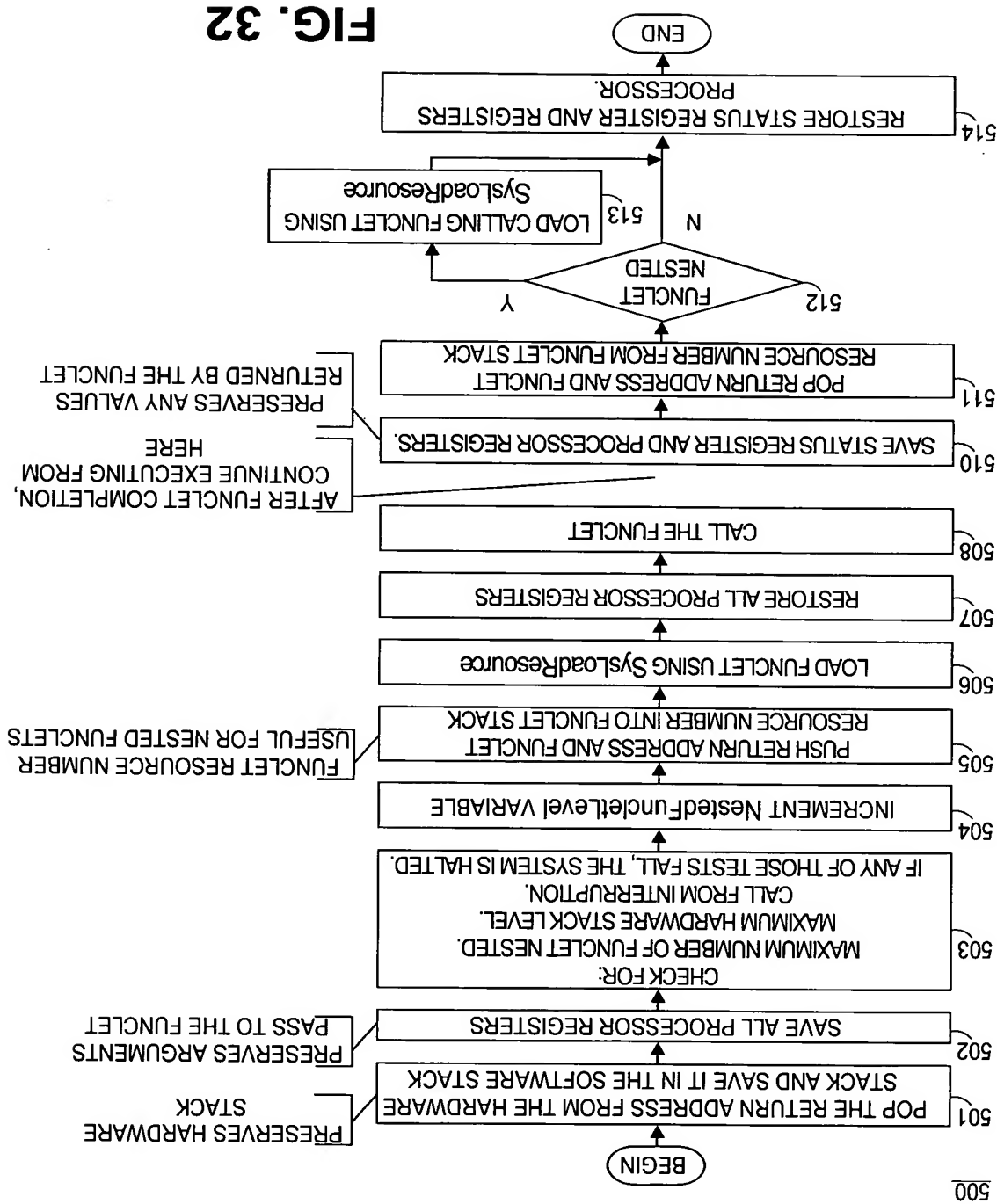
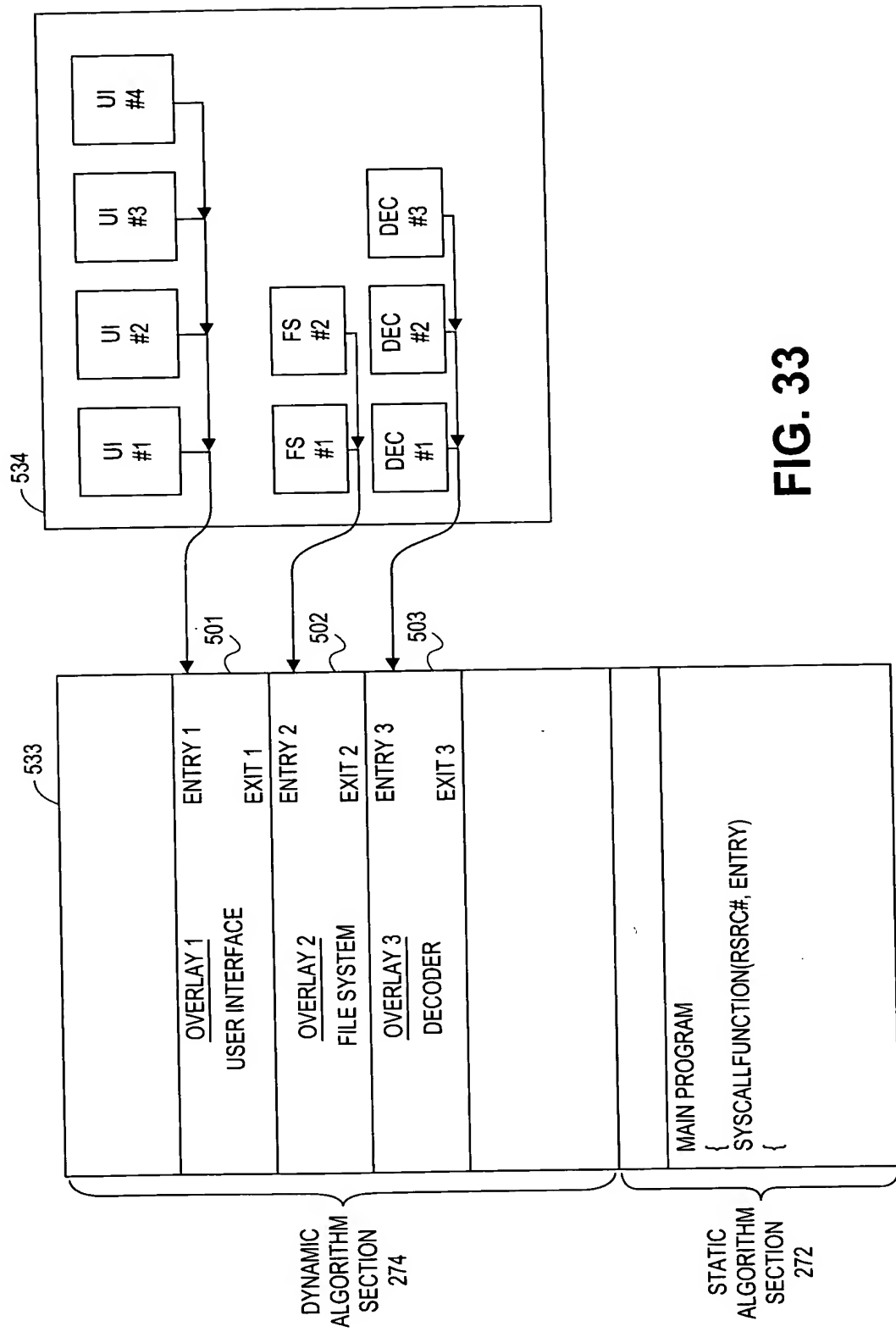
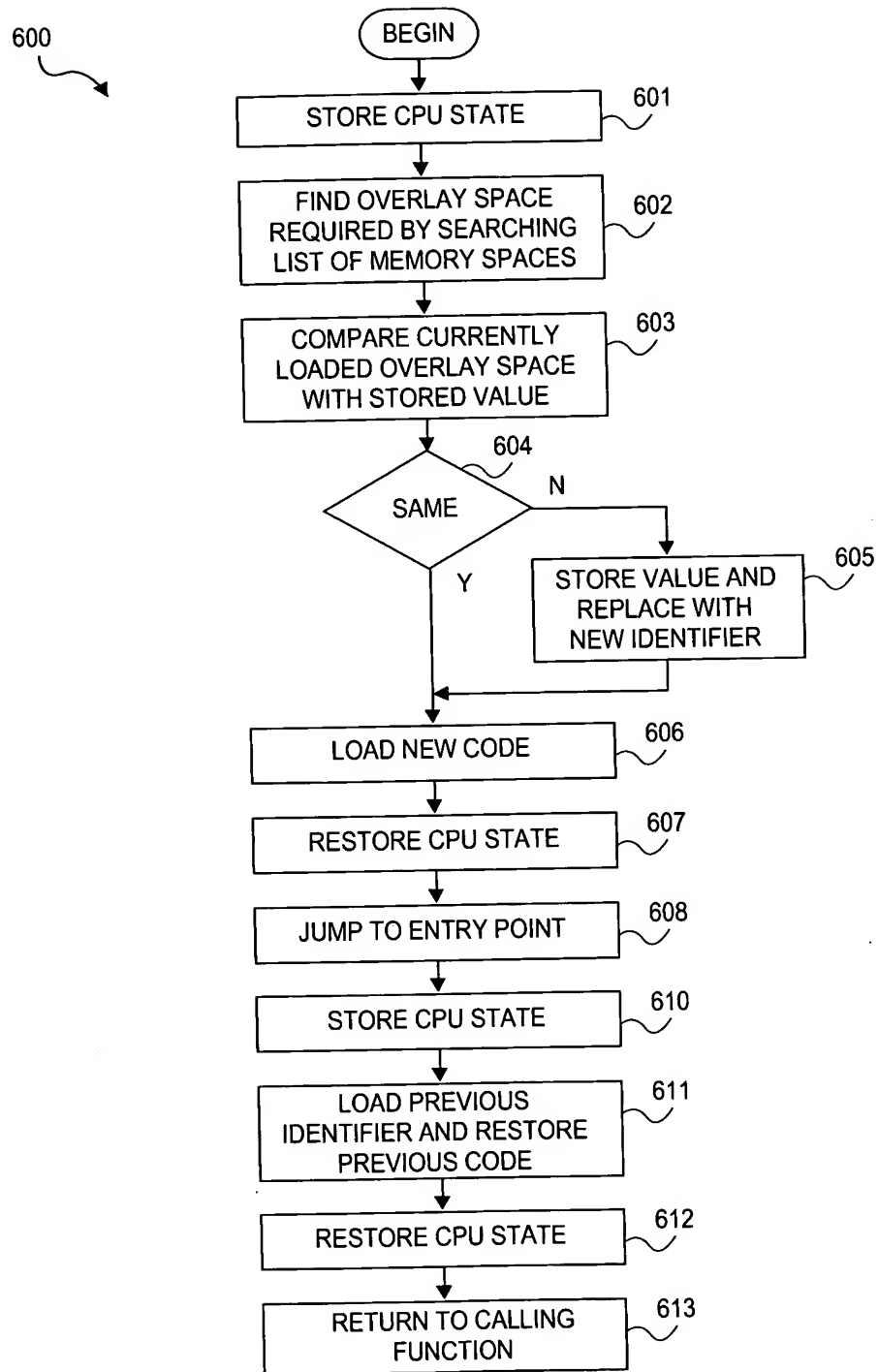


FIG. 32



**FIG. 33**



**FIG. 34**